



What is Biodiesel?

Missouri Energy Center fact sheet

6/2004

Biodiesel is a cleaner-burning fuel for diesel engines made from domestically produced renewable fats and oils such as soybean oil. Biodiesel burns substantially cleaner than petroleum-based diesel fuel. It is an option for improving our environment while reducing dependence on foreign oil, stretching our fossil fuel reserves and providing value-added markets for agricultural products. It can be used in compression-ignition (diesel) engines with no modifications. Biodiesel is simple to use, biodegradable, nontoxic and essentially free of sulfur and aromatics. Pure biodiesel (B100) contains no petroleum, but it can be blended at any level with petroleum diesel to create a biodiesel blend.

- B100: 100 percent biodiesel and no conventional diesel
- B20: 20 percent biodiesel and 80 percent conventional diesel
- B2: 2 percent biodiesel and 98 percent conventional diesel

Benefits

- **Biodiesel offers similar power to diesel fuel.**
- **Biodiesel provides significant lubricity improvement over petroleum diesel fuel.**
- **Reliable engine performance:** Biodiesel's increased lubricity means excellent engine performance and fuel economy.
- **Cleaner and renewable:** Biodiesel reduces exhaust emissions, minimizing black smoke, odor, greenhouse gas emissions, air toxics and particulates; and does not contribute to sulfur dioxide emissions (acid rain).

Biodiesel Myths and Facts

Myth: Biodiesel does not perform as well as diesel.

Fact: One of the major advantages of biodiesel is the fact that it can be used in existing engines and fuel injection equipment with little impact to operating performance. Biodiesel has a higher cetane number than U.S. diesel fuel.

Myth: Biodiesel doesn't perform well in cold weather.

Fact: Biodiesel will gel in very cold temperatures, just as the common #2 diesel does. Although pure biodiesel has a higher cloud point than #2 diesel fuel, typical blends of 20 percent biodiesel are managed with the same fuel management techniques as #2 diesel. Blends of 5 percent biodiesel and less have virtually no impact on cold flow.

Myth: Biodiesel causes filters to plug.

Fact: This issue is less prevalent with B20 blends, and there is no evidence that lower-blend levels such as B2 have caused filters to plug.

Myth: Engine warranty coverage would be at risk.

Fact: The use of biodiesel in existing diesel engines does not void parts and materials and workmanship warranties of any major U.S. engine manufacturer. Links to manufacturers' statements on the use of biodiesel may be found at www.biodiesel.org.

Frequently Asked Questions about Biodiesel

Do I need special storage facilities?

In general, the standard storage and handling procedures used for petroleum diesel can be used for biodiesel. The fuel should be stored in a clean, dry and dark environment. Acceptable storage tank materials include aluminum, steel, fluorinated polyethylene, fluorinated polypropylene and Teflon®. Copper, brass, lead, tin, and zinc should be avoided.

Can I use biodiesel in my existing diesel engine?

Biodiesel can be operated in any diesel engine with no modification to the engine or the fuel system. Biodiesel has a solvent effect that may release deposits accumulated on tank walls and pipes from previous diesel fuel storage. The release of deposits may clog filters initially, and precautions should be taken. Users should be sure that only fuel meeting the biodiesel specification is used.

Where can I purchase biodiesel?

Biodiesel can be made available anywhere in the United States. The Missouri Soybean Association (MSA) maintains a list of biodiesel suppliers in Missouri. A current list is available on their Web site at www.mosoy.org, or by calling the MSA at 1-800-662-3261 (1-800-MOBEAN1). The National Biodiesel Board (NBB) maintains a list of registered fuel marketers. A current list is available on the NBB web site at www.biodiesel.org or by calling the NBB at 1-800-841-5849.

Resources

- National Alternative Fuels Data Center: www.eere.energy.gov/cleancities/afdc
- Clean Cities hotline: 1-800-CCITIES
- National Biodiesel Board: www.biodiesel.org, 1-800-841-5849
- Missouri Soybean Association: www.mosoy.org, 1-800-662-3261

For More Information Contact

Missouri Department of Natural Resources
Energy Center
P.O. Box 176
Jefferson City, MO 65102
1-800-361-4827 or (573) 751-3443
E-mail: energy@dnr.mo.gov
Web site: www.dnr.mo.gov/energy